

# **FabSLAM 3D Design and Fabrication Professional Development**

Course Syllabus – Summer 2016

Angela Hemingway, STEM Action Center

**Course Number:** TBD

**Course Hours:** Three (3)

**Link to Registration:** TBD

**Registration Deadline:** March 31, 2016, midnight MST

## **Location and Course Dates:**

- In Person Training: March 14 – 16, 2016 from 8am-5pm, Discovery Center of Idaho in Boise
- Independent Work: April – May, 2016
- Final summary Due: June 12, 2016 by midnight MST

**Course Cost:** \$60 per credit = \$180

**Instructor Email:** [Angela.Hemingway@STEM.Idaho.gov](mailto:Angela.Hemingway@STEM.Idaho.gov), 208-332-1726

**COURSE DESCRIPTION:** FabSLAM is a multi-week, team-based, digital fabrication challenge where youth learn and practice design, iteration, and production skills primarily focused on 3D design and fabrication. As a FabSLAM coach, the educator will guide the team through the challenge. The educator will support a youth team to complete a multi-week digital fabrication challenge where youth learn and practice skills related to 3D design and 3D printing. The educator will support and guide students to properly document their process and encourage multiple design iterations throughout the challenge. FabSLAM culminates in a Showcase Event where teams will present their products to a panel of judges and a public audience for review and feedback. Judges will announce the winning design at the Showcase Event.

**COURSE OBJECTIVES:** Educators will attend the three-day professional development FabSLAM training on 3D design and fabrication and will receive a Printbot 3D printer for his/her educational setting/organization. Participants will form a team comprised of 4-6 youth and begin working on the FabSLAM youth competition. Participants will work with the team and serve as the point of contact for all communications. The educator will be responsible for coordinating meetings, guiding the problem-solving and design thinking process, and facilitating the team to solve the challenge by creating a product based on their design. The participant will also work with the youth to plan for proper documentation and creation of a timeline in order to complete the project for the Showcase Event. The educator will ensure the youth attend the FabSLAM Showcase Event and are prepared to share their project and speak about their design.

## **LEARNER OUTCOMES:**

- 1) The participant will demonstrate an understanding of the 3D design and fabrication process including the use of 3D design/printing software and hardware.
- 2) The participant will troubleshoot 3D printing and design issues.
- 3) The participant will create and print in 3D.
- 4) The participant will form a team to compete in the FabSLAM Showcase Event.
- 5) The participant will serve as the coach for a youth team.

**Continued to Page 2...**

**COURSE ASSIGNMENT:**

- 1) Attend the three-day FabSLAM professional development workshop in Boise.
- 2) Form a youth team to compete in the FabSLAM Showcase Event.
- 3) Return to the Showcase Event in Boise with the team and printed solution.
- 4) Write a two page reflection on what was learned by participating in the professional development and competition.
- 5) Provide a copy of the final .stl file to the STEM Action Center.
- 6) Provide a 3D print of the final design to the STEM Action Center.

**FINAL ASSIGNMENT DUE DATE:** June 12, 2016, by midnight MST via email to [Angela.Hemingway@STEM.Idaho.gov](mailto:Angela.Hemingway@STEM.Idaho.gov)

**TRANSCRIPT DATE:** Summer 2016